

IN THE CLAIMS

1-46 (Cancelled)

47. (Original) A method of resampling comprising:
providing data in a first spatial distribution of data points;
providing a second spatial distribution of data points; and
resampling data from said first spatial distribution onto said second spatial distribution, without generating artifacts in the data, which artifacts could be corrected by pixel-by-pixel multiplying an image reconstructed from said resampled data, by a pre-determined post-compensation matrix,
wherein said resampling is performed by multiplying said data by a single matrix.
48. (Original) A method according to claim 47, wherein said single matrix is a sparse matrix in which each row comprises at least 20% zero elements.
49. (Original) A method according to claim 48, wherein said single matrix is a sparse matrix in which each row comprises at least 50% zero elements.
50. (Original) A method according to claim 49, wherein said single matrix is a sparse matrix in which each row comprises at least 80% zero elements.
51. (Original) A method according to claim 47, wherein said second spatial distribution comprises a uniform spatial distribution.
52. (Original) A method according to claim 47, wherein said first spatial distribution comprises a non-uniform spatial distribution.
53. (Original) A method of resampling comprising:
providing data in a first spatial distribution of data points;
providing a second spatial distribution of data points;

pro-multiplying said data by a diagonal density pro-compensation matrix which includes at least one element having a negative value; and

resampling said data from said first spatial distribution onto said second spatial distribution.

54. (Original) A method according to claim 53, wherein said diagonal pro-compensation matrix comprises both positive and negative elements.

55. (Original) A method according to claim 53, comprising reconstructing an image from said resampled data by applying an FT (Fourier Transform) to said data.

56. (Original) A method according to claim 55, comprising pixel-by-pixel multiplying the reconstructed image by a pre-determined post-compensation matrix.

57-169 (Cancelled)